

**U.S. DEPARTMENT OF ENERGY
DEPARTMENT-WIDE
FUNCTIONAL AREA QUALIFICATION STANDARD**

EMERGENCY MANAGEMENT QUALIFICATION STANDARD

Defense Nuclear Facilities Technical Personnel



**U.S. Department of Energy
Washington, D.C. 20585**

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Approval and Concurrence

The Director of the Office of Nonproliferation and National Security is the Management Sponsor for the Department-wide Emergency Management Functional Area Qualification Standard. The Management Sponsor is responsible for reviewing the Qualification Standard to ensure that the technical content is accurate and adequate for Department-wide application. The Management Sponsor, in coordination with the Human Resources organization, is also responsible for ensuring that the Qualification Standard is maintained current. Concurrence with this Qualification Standard by the Director of the Office of Nonproliferation and National Security is indicated by the signature below.

The Technical Personnel Program Coordinator (TPPC) is responsible for coordinating the consistent development and implementation of the Technical Qualification Program throughout the Department of Energy. Concurrence with this Qualification Standard by the Technical Personnel Program Coordinator is indicated by the signature below.

The Technical Excellence Executive Committee (TEEC) consists of senior Department of Energy managers. This Committee is responsible for reviewing and approving the Qualification Standard for Department-wide application. Approval of this Qualification Standard by the Technical Excellence Executive Committee is indicated by the signature below.

NOTE: **The signatures below reflect concurrence and approval of this Qualification Standard for interim implementation. Final concurrence and approval will occur in December 1995, pending comments received based upon implementation.**

CONCURRENCE:

Director of the Office of
Nonproliferation and National Security

Technical Personnel Program
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APPROVAL:

Chairman
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FUNCTIONAL AREA QUALIFICATION STANDARD

FUNCTIONAL AREA

Emergency Management

PURPOSE

The Technical Qualification Program is divided into three levels of technical competence and qualification. The General Technical Base Qualification Standard establishes the base technical competence required of all Department of Energy defense nuclear facility technical personnel. The Functional Area Qualification Standards build on the requirements of the General Technical Base Qualification Standard and establish Department-wide functional competence requirements in each of the identified functional areas. Office/facility-specific qualification standards establish unique operational competency requirements at the Headquarters or Field element, site, or facility level.

The Emergency Management Functional Area Qualification Standard establishes common functional area competency requirements for all Department of Energy emergency management technical personnel who provide management oversight or direction impacting the safe operation of defense nuclear facilities. Satisfactory and documented completion of the competency requirements contained in this Standard ensures that technical employees possess the minimum requisite competence to fulfill their functional area duties and responsibilities. Additionally, these competency requirements provide the functional foundation to assure successful completion of the appropriate Office/facility-specific qualification standard.

APPLICABILITY

This Standard applies to all Department of Energy nuclear safety system technical personnel who provide management direction or oversight impacting the safe operation of defense nuclear facilities. Personnel designated by Headquarters or Field element line management as participants in the Technical Qualification Program are required to meet the requirements of this Standard as defined in DOE Order 3410, Training.

IMPLEMENTATION REQUIREMENTS

The competencies contained in the Standard are divided into the following four categories:

1. General Technical
2. Regulatory
3. Administrative
4. Management, Assessment, and Oversight

Each of the categories is defined by one or more competency statements indicated by bold print. The competency statements define the expected knowledge and/or skill that an individual must possess, and are requirements. Each of the competency statements is further explained by a

listing of supporting knowledge and/or skill statements. The supporting knowledge and/or skill statements are not requirements and do not necessarily have to be fulfilled to meet the intent of the competency.

The competencies identify a familiarity level, working level, or expert level of knowledge; or they require the individual to demonstrate the ability to perform a task or activity. These levels are defined as follows:

Familiarity level is defined as basic knowledge of or exposure to the subject or process adequate to discuss the subject or process with individuals of greater knowledge.

Working level is defined as the knowledge required to monitor and assess operations/activities, to apply standards of acceptable performance, and to reference appropriate materials and/or expert advice as required to ensure the safety of Departmental activities.

Expert level is defined as a comprehensive, intensive knowledge of the subject or process sufficient to provide advice in the absence of procedural guidance.

Demonstrate the ability is defined as the actual performance of a task or activity in accordance with policy, procedures, guidelines, and/or accepted industry or Department practices.

Headquarters and Field elements shall establish a program and process to ensure that all defense nuclear facility technical personnel required to participate in the Technical Qualification Program meet the competency requirements contained in this Standard. Documentation of the completion of the requirements of this Standard shall be included in the employee's training and qualification record.

In select cases, it may be necessary to exempt an individual from completing one or more of the competencies in this Functional Area Qualification Standard. Exemptions from individual competencies shall be justified and documented in accordance with DOE Order 3410, Training. Exemptions shall be requested by the individual's immediate supervisor, and approved one level above the individual's immediate supervisor.

Equivalencies may be granted for individual competencies based upon an objective evaluation of the employee's prior education, experience, and/or training. Documentation of equivalencies shall indicate how the competency requirements have been met. The supporting knowledge and/or skill statements may be considered when evaluating an individual's ability with respect to each competency requirement.

Training shall be provided to employees in the Technical Qualification Program who do not meet the competencies contained in the qualification standard. Departmental training will be based upon supporting knowledge and/or skill statements similar to the ones listed for each of the competency statements. Headquarters and Field elements should use the supporting knowledge and/or skill statements as a basis for evaluating the content of any training courses used to provide individuals with the requisite knowledge and/or skill required to meet the qualification standard competency statements.

DUTIES AND RESPONSIBILITIES

The following are duties and responsibilities normally expected of defense nuclear facility technical personnel assigned to the emergency management functional area:

- A. Communicate with Headquarters, Field elements, regulatory agencies, international, Federal, State, tribal, and local emergency response organizations, and the public.
- B. Inform and advise the Department of Energy community of emergency management program status, activities, and issues.
- C. Plan, observe and evaluate emergency management activities and Federal and contractor technical performance to ensure the adequacy, effectiveness, and compliance with Department of Energy (DOE) Order Series 5500 and other DOE Orders and Federal regulations.
- D. Review, and/or approve emergency management documentation.
- E. Serve as a Department of Energy technical point-of-contact and/or subject matter expert for emergency management activities.
- F. Facilitate the notification and reporting of occurrences under Department of Energy (DOE) Orders 5000.3, Occurrence Reporting and Processing of Operations Information, and 5500.2, Emergency Categories, Classes, and Notification and Reporting Requirements.
- G. Participate in developing, negotiating, and managing agreements, including memorandums of agreement (MOA), memorandums of understanding (MOU), and agreements in principle (AIP).
- H. Resolve, or facilitate the resolution of, emergency management issues.
- I. Respond to and participate in facility, site, or local emergency events/exercises and serve as the Department of Energy presence for emergency activities, exercises or operations.
- J. Recommend the mobilization of Department of Energy emergency response assets, as appropriate.
- K. Support the development, implementation, and evaluation of emergency plans.

Additional duties and responsibilities specific to the site, facility, operational activities, and/or other involved organizations shall be contained in the facility-specific qualification standard(s).

BACKGROUND AND EXPERIENCE

The U.S. Office of Personnel Management's Qualification Standards Handbook establishes minimum education, training, experience, or other relevant requirements applicable to a particular occupational series/grade level, as well as alternatives to meeting specified requirements.

The preferred education and experience for emergency management personnel responsible for directing or assessing emergency management programs is:

1. Education:

Bachelor of Science degree in engineering, physical science, or other related technical discipline; or meet the alternative requirements specified in the Qualifications Standards Handbook.

2. Experience:

Industry, government, military, or Departmental facility operations-related experience that has provided specialized experience in the areas of emergency management, emergency response, hazardous materials, industrial safety, regulatory compliance, industrial or facility operation, and/or quality assurance. Specialized experience may be demonstrated through possession of the competencies outlined in this Standard.

REQUIRED COMPETENCIES

The competencies contained in this Standard are distinct from those competencies contained in the General Technical Base Qualification Standard. All emergency management personnel must complete the competency requirements of the General Technical Base Qualification Standard prior to or in parallel with the completion of the competency requirements contained in this Standard. Each of the competency statements defines the level of expected knowledge and/or skill that an individual is required to possess to meet the intent of this Standard. The supporting knowledge and/or skill statements further describe the intent of the competency statements but are not requirements.

1. GENERAL TECHNICAL

1.1 Emergency management personnel shall demonstrate a familiarity level knowledge of the relationship of other disciplines to the emergency management function and the ability to work with personnel in these other disciplines.

Supporting Knowledge and/or Skills

- a. Explain the roles and responsibilities of each of the following disciplines to emergency management:

- Health Physics
- Environmental Transport & Diffusion (air and water)
- Industrial Hygiene
- Chemistry
- Biology
- Worker and Public Health & Safety
- Hazardous Material (storage, handling, & transport)
- Criticality Safety
- Explosives Safety
- Environmental Protection
- Detection & Monitoring (radiological and non-radiological)
- Consequence Assessment (models & codes)
- Protective Measures (personal protective equipment, sheltering, decontamination, evacuation, & relocation)
- Fire Protection/Fire Suppression Operations
- Operations & Maintenance
- Security
- Medical
- Public Affairs
- Legal

1.2 Emergency management personnel shall demonstrate a working level knowledge of hazardous material safety to oversee emergency activities and to provide guidance in mitigating emergencies.

Supporting Knowledge and/or Skills

- a. Discuss the concerns associated with the use of hazardous materials.
- b. Discuss the general safety precautions necessary for the handling, storage, and disposal of hazardous materials, to include explosive, flammable and combustible substances.
- c. Describe the types, uses, and limitations of chemical detection and monitoring equipment.
- d. Discuss the emergency procedures associated with accidental releases of hazardous materials to the environment, including: notifications, protective equipment, decontamination activities, and emergency rescue and treatment.

1.3 Emergency management personnel shall demonstrate a working level knowledge of health physics and radiation protection to oversee emergency activities and provide guidance in mitigating emergencies.

Supporting Knowledge and/or Skills

- a. Describe the different types of radiation.
- b. Discuss the fundamentals of radiation protection as related to emergency response.
- c. Describe the relationship between dose and radiological injury.
- d. Discuss the following terms and concepts: bioaccumulation, biological half-life, intake, contamination, exposure, and criticality.
- e. Describe the types, uses, and limitations of radiation detection and monitoring equipment
- f. Discuss the emergency procedures associated with radiological releases to the environment, including: notifications, protective equipment, decontamination activities, and emergency rescue and treatment.
- g. Discuss the general safety precautions necessary for the handling, storage, and disposal of radioactive material.

1.4 Emergency management personnel shall demonstrate a working level knowledge of protective measures.

Supporting Knowledge and/or Skills

- a. Discuss the types, uses, and limitations of radiological, chemical, and personal protective equipment.
- b. Describe the implementation and process of decontamination operations in a radiological and chemical environment.
- c. Discuss the concepts of sheltering, evacuation, and relocation.
- d. Discuss the role of Protective Action Guides, Emergency Response Planning Guides, and pollution standards in emergency planning and response.

1.5 Emergency management personnel shall demonstrate a working level knowledge of external agency response to an emergency.

Supporting Knowledge and/or Skills

- a. Discuss the concept of Emergency Public Information and the role between the Public and Joint Information Center in disseminating information in an emergency.

- b. Discuss the use and implementation of Memorandums of Agreement/Understanding with off-site agencies.
- c. Discuss the role of the Protective Force in response to an emergency.
- d. Discuss the use of Agreements in Principle and the effect on emergency planning and response.
- e. Discuss the medical needs in response to an emergency.

1.6 Emergency Management personnel shall demonstrate a working level knowledge of the concepts associated with environmental protection, transport and diffusion.

Supporting Knowledge and/or Skills

- a. Discuss windspeed, wind direction, and stability as related to emergency assessment and response.
- b. Describe the concepts of concentration and deposition and their relationship to emergency planning an response.
- c. Define the terms ground water, surface water, and aquifer and discuss transport and diffusion in these media in the context of emergency planning and response.
- d. Discuss the concepts of ecosystem and habitat in the context of environmental protection as part of emergency planning and response.
- e. Describe the role of consequence assessment process, including the use of modeling techniques and computer codes and the integration of monitoring information.

1.7 Emergency Management personnel shall demonstrate a working level knowledge of command and control during an emergency.

Supporting Knowledge and/or Skills

- a. Discuss the concept and define the components of the Incident Command System in the context of on-site and off-site emergency response.
- b. Describe the relationship of incident command to incident mitigation.
- c. Describe the relationship of the Incident Commander to the facility/site emergency response organization.
- d. Describe how the transfer of command should occur from the shift supervisor to the facility/site emergency response organization.
- e. Describe how the transfer of command should occur between shifts at the incident command post and at the emergency operations center(s).
- f. Discuss the training needed for incident commanders and the managers of the emergency response organization.

- g. Describe the relationship and regulatory authority(ies) of the on-site emergency organization to those of local, state, and tribal emergency response organizations.

1.8 Emergency management personnel shall demonstrate a working level knowledge of decontamination procedures.

Supporting Knowledge and/or Skills

- a. Describe the equipment and layout required for a decontamination area.
- b. List the eight basic methods of decontamination and when they would be applicable.
- c. Describe the decontamination process for chemically- or radioactively-contaminated personnel.
- d. Describe the decontamination process for chemically- or radioactively-contaminated equipment.
- e. Explain the priorities for treatment of radioactively-contaminated, injured personnel.
- f. Explain the priorities for treatment of chemically-contaminated, injured personnel.

1.9 Emergency management personnel shall have a familiarity level knowledge of emergency rescue and treatment.

Supporting Knowledge and/or Skills

- a. Discuss the field treatment and transportation requirements for badly injured personnel.
- b. Discuss the qualifications of those who apply basic and advanced first aid, emergency medical technicians, and paramedics.
- c. Discuss symptoms and field treatment of hypothermia and shock.

1.10 Emergency Management personnel shall demonstrate a working knowledge of the integration/interface of the following types of emergency plans:

- **Site emergency plans**
- **Facility emergency plans**
- **Building emergency plans**
- **Security emergency plans**
- **Spill prevention, containment and countermeasure plans**
- **Fire prevention/suppression plans**
- **Other worker safety plans**
- **Local, state, and tribal emergency plans**
- **Other environmental emergency contingency plans**

Supporting Knowledge and/or Skills

- a. Describe the typical content and applicability of each of the emergency plans listed above.
- b. Describe the integration/interface of the listed plans.
- c. Describe the roles and responsibilities of the on-site and off-site emergency response organizations identified in the above emergency plans.

1.11 Emergency Management personnel shall demonstrate a working level knowledge of the relationships of emergency planning, preparedness, response, and post-incident activities.

Supporting Knowledge and/or Skills

- a. Discuss the relationships of emergency planning, preparedness, response, and post-incident activities.
- b. Define recovery and reentry, and describe the typical contents of recovery and reentry plans.
- c. Discuss the roles and responsibilities of the Departmental organizational elements in developing recovery and reentry plans.

2. REGULATORY

NOTE 1: When Department of Energy (DOE) directives are referenced in the qualification standard, the most recent revision should be used.

2.1 Emergency management personnel shall demonstrate an expert level knowledge of the following emergency management related Department of Energy (DOE) Orders:

- **DOE Order 5500.1, Emergency Management System**
- **DOE Order 5500.2, Emergency Categories, Classes, and Notification and Reporting Requirements**
- **DOE Order 5500.3, Planning and Preparedness for Operational Emergencies**
- **DOE Order 5500.7, Emergency Operating Records Protection Program**
- **DOE Order 5500.10, Emergency Readiness Assurance Program**

Supporting Knowledge and/or Skills

- a. Describe the purpose of the Orders listed above.
- b. Discuss the general roles and responsibilities of the departmental elements for management of the Department's Emergency Management System.
- c. Define "Operational Emergencies" and the circumstances to which they apply.
- d. Discuss the classes of hazards contained in DOE Order 5500.1, Emergency Management System.
- e. Discuss the Department's three-tiered organizational approach to managing Operational Emergencies.
- f. Review and comment on appropriate plans and procedures for timely and accurate determination of emergency class, notification and reporting of emergency events.
- g. Using DOE Order 5500.3, Planning and Preparedness for Operational Emergencies, Section 8, Policy, discuss the stated policy.
- h. Discuss the concept of "commensurate with hazard" stated in DOE Order 5500.3, Planning and Preparedness for Operational Emergencies.
- i. Using the Requirements Section of DOE Order 5500.3, Planning and Preparedness for Operational Emergencies, and the applicable Department of Energy Emergency Management Guide, discuss the purpose and function of each of the following required program elements:
 - Emergency response organization
 - Off-site response interfaces
 - Operational Emergency Event Classes
 - Notification
 - Consequence assessment
 - Protective actions

- Medical support
- Recovery and reentry
- Public information
- Emergency facilities and equipment
- Training
- Drills and exercises
- Program administration

j. State the purpose of an Emergency Readiness Assurance Plan.

2.2 Emergency management personnel shall demonstrate a working level knowledge of Department of Energy (DOE) Order 5500.4, Public Affairs Policy and Planning Requirements for Emergencies.

Supporting Knowledge and/or Skills

- a. Describe the major requirements and purpose of DOE Order 5500.4, Public Affairs Policy and Planning Requirements for Emergencies.
- b. Discuss the records requiring protection and the rationale associated with protecting these records.
- c. Discuss the Department's public affairs policy with respect to emergencies.
- d. Discuss the roles and responsibilities of the various Departmental elements in interfacing with the public and media in the event of an emergency.
- e. Describe the roles and responsibilities of Departmental senior officials and emergency management personnel in emergency or crisis situations.
- f. Discuss the transmittal requirements for emergency plans.

2.3 Emergency management personnel shall demonstrate a working-level knowledge of the capabilities of the Department of Energy National Response Assets.

Supporting Knowledge and/or Skills

- a. Discuss the specific responsibilities of the Regional Coordinating Office associated with the Radiological Assistance Program (DOE Order 5530.3 [Old section 2.1.c.]).
- b. Discuss the functions, capabilities, and limitations of the Accident Response Group (DOE Order 5530.1A).
- c. Describe the capabilities, limitations, and responsibilities of the Nuclear Emergency Search Team (DOE Order 5530.2).
- d. Discuss the purpose, activation method, and capabilities of the Radiological Assistance Teams (DOE Order 5530.3).
- e. Describe the capabilities, limitations, and response times of the Aerial Measuring System (DOE Order 5530.4).

- f. Discuss the function, responsibilities, response times, and logistical needs of the Federal Radiological Monitoring and Assessment Center (DOE Order 5530.5).
- g. Describe the functions, major input parameters, and response times of the Atmospheric Release Advisory Capability.
- h. Discuss the functions and capabilities of the Radiological Emergency Assistance Center/Training Site.

2.4 Emergency management personnel shall demonstrate an expert level knowledge of the notification and event classification requirements in Department of Energy (DOE) Order 5500.2, Emergency Categories, Classes, and Notification and Reporting Requirements.

Supporting Knowledge and/or Skills

- a. Define the categories and classes of emergency events as stated in DOE Order 5500.2, Emergency Categories, Classes, and Notification and Reporting Requirements.
- b. Define and discuss the notification requirements in DOE Order 5500.2, Emergency Categories, Classes, and Notification and Reporting Requirements, for the reporting of emergency events. Include in this discussion how these requirements differ from the reporting requirements in DOE Order 5000.3, Occurrence Reporting and Processing of Operations Information.
- c. Discuss the maximum time frame to make notifications (initial and follow-up) to off-facility (HQ, State, local, etc.) agencies after an emergency has been declared as identified in DOE Orders 5000.3, Occurrence Reporting and Processing of Operations Information, 5500.1, Emergency Management System, and 5500.2, Emergency Categories, Classes, and Notification and Reporting Requirements. Include in this discussion a description of the priorities for making these notifications.
- d. Discuss the reasons for making initial and follow-up notifications to off-site agencies as directed in DOE Order 5000.3, Occurrence Reporting and Processing of Operations Information, and DOE Order 5500.2, Emergency Categories, Classes, and Notification and Reporting Requirements.

- e. Compare the Department's notification requirements contained in DOE Order 5500.2, Emergency Categories, Classes, and Notification and Reporting Requirements, with those contained in the Resource Conservation and Recovery Act, Clean Water Act, Clean Air Act, Comprehensive Environmental Response, Compensation and Liability Act, Hazardous Material Transportation Uniform Safety Act, and the Emergency Planning and Community Right to Know Act.

2.5 Emergency management personnel shall demonstrate a working level knowledge of the notification and reporting requirements in Department of Energy (DOE) Order 5000.3, Occurrence Reporting and Processing of Operations Information.

Supporting Knowledge and/or Skills

- a. Define "reportable occurrence" and the rationale associated with reporting as identified in DOE Order 5000.3, Occurrence Reporting and Processing of Operations Information.
- b. Using an actual facility-specific occurrence report, discuss the factors that contributed to the occurrence.
- c. Using the Requirements Section of DOE Order 5000.3, Occurrence Reporting and Processing of Operations Information, describe the intent and contents of the following for notification reports:
 - Analysis
 - Categorization
 - Closeout
 - Corrective action implementation
 - Generic implications
 - Identification
 - Notification process
 - Reporting philosophy
 - Reporting requirements
 - Root cause determination
 - Tracking
- d. Explain the responsibilities of the emergency management personnel and Management and Operating (M&O) contractors for occurrence reporting, including a discussion of the following:
 - Notification report
 - 10-day occurrence report
 - Final report
 - Closing out and verifying occurrence reports
 - Processing occurrence reports which cross lines of emergency management responsibility
 - Contractor occurrence reporting procedures
- e. Explain the conceptual differences and relationship between "occurrence reporting" and "notification" as contained in DOE Order 5000.3, Occurrence Reporting and Processing of Operations Information, and DOE Order 5500.2, Emergency Categories, Classes, and Notification and Reporting Requirements.

2.6 Emergency Management personnel shall demonstrate a working level knowledge of the following guidance documents sufficient to apply the guidance to emergency management activities.

- **Emergency Management Guides (EMGs)**
- **Emergency Response Planning Guidelines (ERPGs)**
- **Protective Action Guide (PAG)**

Supporting Knowledge and/or Skills

- a. Discuss the topic associated with each of the Emergency Management Guides including implementation policies and methodologies.
- b. Discuss the development and implementation of Emergency Response Planning Guidelines and alternatives to use where they do not exist.
- c. Discuss the relationship between the Emergency Response Planning Guidelines and the Protective Action Guide associated with radiological exposure.
- d. Using the Hazard Assessment Guide (HAG), discuss the screening process including the screening thresholds for extremely hazardous, hazardous, and radiological materials.
- e. Discuss the philosophy of Emergency Action Levels (EALs) both symptomatic and event based as discussed in the DOE Order 5500.3, Planning and Preparedness for Operational Emergencies, and the Emergency Management Guides.
- f. Discuss the basis for determining the event classification using Emergency Action Levels and potential consequences using the Hazard Assessment Guide.
- g. Using DOE Order 5500.3 Planning and Preparedness for Operational Emergencies, and the Emergency Management Guides dealing with public information, discuss the responsibilities of each of the listed positions in the public information organization.
- h. Using the DOE Order 5500.3, Planning and Preparedness for Operational Emergencies, and the Emergency Management Guides, discuss the definitions and uses of drills and exercises. Discuss the role of players, controllers, and evaluators with respect to conduct and safety.
- i. Discuss the bounds and limitations of free play in regard to a drill or exercise.
- j. Discuss the responsibilities for safety during a drill/exercise. Explain how safety is built into a drill/exercise and how it is maintained during performance.
- k. Discuss protective actions and their effectiveness with regard to hazards and events.
- l. Discuss protective action recommendations with regard to general public implementation.

- m. Discuss the hazard characterization process as identified in the Hazard Assessment Guide.

2.7 Emergency management personnel shall demonstrate a working level knowledge of the following Federal regulations related to emergency management.

- 10 CFR 835, Occupational Radiation Protection
- 18 CFR 12, Safety of Water Power Projects and Project Works
- 29 CFR 1910.38, Employee Emergency Plans and Fire Prevention Plans
- 29 CFR 1910.94, 96, 134, & 165 Occupational Safety and Health Act (OSHA)
- 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response
- 29 CFR 1910.1200, Hazard Communications
- 40 CFR 262, 264, & 280, Resource Conservation and Recovery Act (RCRA)
- 40 CFR 265, Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- 49 CFR 172, Hazardous Materials Table, Special Provisions, Hazardous Materials Communication, Emergency Response Information, and Training Requirements
- Superfund Amendments and Reauthorization Act (SARA) Title III
- 40 CFR 350, Trade Secrecy Provisions and Information Disclosure Requirements
- 40 CFR 355, Facility Notification and Release Reporting Requirements
- 40 CFR 370, Hazardous Chemical Inventory Reporting Requirements
- 40 CFR 372, Toxic Release Reporting Requirements
- 40 CFR 300 & 302, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Hazardous Materials Transportation Uniform Safety Act of 1990 (HMTUSA)
- Clean Air Act Amendments
- Oil Pollution Act
- 40 CFR 112 & 117, Clean Water Act (CWA)

Supporting Knowledge and/or Skills

- a. Discuss the relationship between the requirements of Department of Energy Emergency Management Orders and the above listed Federal Regulations that govern Department operations.
- b. Discuss 18 CFR 12, Subpart C, the Oil Pollution Act of 1990, Section 4202(a)(6) and 40 CFR 300, the National Oil and Hazardous Substances Pollution Contingency Plan.
- c. Discuss 29 CFR 1910.120 and its impact on defense nuclear facility operations and the training and qualification of emergency response personnel.
- d. Discuss the transition from emergency response to post emergency response.
- e. Discuss the differences between a Hazardous Materials (HAZMAT) Team and a Fire Brigade as identified in 29 CFR 1910.120, 40 CFR 264, and 40 CFR 265.
- f. Define the roles and responsibilities of the State Emergency Response Commission (SERC) as required by the Superfund Amendments and Reauthorization Act, Title III.
- g. Discuss the off-site notifications required by 40 CFR 302 and 355 as directed in the Emergency Management Guide (EMG) dealing with notifications.
- h. Define the roles and responsibilities of the Local Emergency Planning Committees as required by the Superfund Amendments and Reauthorization Act, Title III.
- i. Specify the required emergency response training for "site workers," and those who are not "on-site" on a regular basis.
- j. Discuss the similarities and differences of the Emergency Response Plan identified in 29 CFR 1910.120 versus the emergency plan requirements of DOE Order 5500.3, Planning and Preparedness for Operational Emergencies.
- k. Explain the five levels of hazardous materials response as identified in 29 CFR 1910.120.
- l. Discuss the requirements of 40 CFR 264 & 265 with regard to emergency response organizations and its relationship to DOE Order 5500.3, Planning and Preparedness for Operational Emergencies.
- m. Discuss the 40 CFR 264 & 265 requirements with regard to "Contingency Plans" and their relationship to the requirements of DOE Order 5500.3, Planning and Preparedness for Operational Emergencies.

3. ADMINISTRATIVE

3.1 Emergency Management personnel shall demonstrate a working level knowledge of Departmental emergency management roles and responsibilities.

Supporting Knowledge and/or Skills

- a. Explain the emergency management roles and responsibilities of the organizational elements of the Department (Field element, Program Office, others).
- b. Describe the roles and responsibilities of the Department in support of the Federal Response Plan, the Federal Radiological Emergency Response Plan, and the National Contingency Plan.
- c. Discuss the emergency management relationships of other federal agencies and local, state, and tribal organizations to the Department.
- d. Discuss the emergency notification and communication requirements and procedures between the Department and other federal, local, state, and tribal organizations.
- e. Explain the Department's role in international emergency management activities.
- f. Explain the roles of non-government organizations such as the Training Resources and Data Exchange emergency management special interest group, the National Coordinating Council on Emergency Management, and the National Emergency Management Association relative to the Department's emergency management activities.

4. MANAGEMENT, ASSESSMENT, AND OVERSIGHT

NOTE 1: When Department of Energy (DOE) directives are referenced in the qualification standard, the most recent revision should be used.

4.1 Emergency management personnel shall demonstrate a working level knowledge of the development, review, and/or approval of emergency management planning documents.

Supporting Knowledge and/or Skills

- a. Discuss the purpose and function of the emergency management plan implementation procedures.
- b. Explain the relationship between Department of Energy (DOE) Orders, emergency plans, and implementation procedures.
- c. Discuss the expected content of and processes used for the development, review and approval of the following documents:
 - Exercise packages and post-exercise documentation
 - Hazard assessments
 - Self assessments
 - Outside appraisals
 - Exercise corrective action plans
 - Consequence assessment model support documentation
 - Occurrence reports
- d. Discuss the requirements contained in DOE Order 5500.3, Planning and Preparedness for Operational Emergencies and the Emergency Management Guides regarding the development, review, and approval of emergency plans.
- e. Discuss the roles and responsibilities of emergency management personnel as related to the National Contingency Plan (NCP).

4.2 Emergency Management personnel shall demonstrate a working level knowledge of the development, review, and approval process for emergency management documentation.

Supporting Knowledge and/or Skills

- a. Describe the process for review and approval of the following documents:
 - Facility/site hazards assessments
 - Facility emergency plans
 - Site emergency plans
 - Facility/site implementing procedures
- b. Describe the process for developing and submitting corrective action plans in response to evaluation and appraisal findings.

- c. Describe the process for developing, reviewing, submitting, and approving Emergency Readiness Assurance Plans.

4.3 Emergency Management personnel shall demonstrate a working level knowledge of the process for planning, conducting, and evaluating emergency response exercises.

Supporting Knowledge and/or Skills

- a. Describe the process for planning emergency response exercises.
- b. Describe the process for conducting an emergency response exercise, including the "players" and "controllers" organizations and the opportunity for post-event critiques.
- c. Describe the process for internal and external evaluation of emergency response exercises, including the development or response to findings.
- d. Perform one of the following activities related to emergency drills, exercises, or events:
 - In accordance with the Emergency Management Guides, act as an evaluator or exercise controller during an exercise.
 - Serve as a member of a drill/exercise planning group.
 - Serve as a member of a scenario development group for an annual exercise.
 - Lead a drill/exercise post event critique.
 - Lead the development of and present the formal management critique as identified in the Emergency Management Guides.
 - Coordinate the writing of an exercise final report responding to objectives that were both met and not met as identified in the Emergency Management Guides.

4.4 Emergency management personnel shall demonstrate a familiarity level knowledge of program/project management practices and how contractor resources are applied to meet commitments to emergency management quality, safety, cost, and schedule.

Supporting Knowledge and/or Skills

- a. Explain the purpose of project management.
- b. Describe the life cycle of a typical project.
- c. Describe typical documents and data sources utilized in project management.
- d. Identify and explain the major elements of a project, and discuss their relationship.

- e. Explain the purpose, and use of a Project Management Plan (PMP).
- f. Discuss the role of configuration management as it relates to project management.
- g. Describe the purpose and use of work packages and/or planning packages.
- h. Describe the purpose of schedules, and discuss the use of milestones and activities.
- i. Describe the "critical path method" of scheduling.
- j. Describe the requirements for project/program files and documentation.

4.5 Emergency management personnel shall demonstrate a familiarity level knowledge of contract management as it relates to emergency management.

Supporting Knowledge and/or Skills

- a. Describe the role of emergency management personnel in contractor oversight.
- b. Explain the types of contracts employed by the Department of Energy.
- c. Identify the key elements and features of an effective Department of Energy and operating contractor relationship.
- d. Describe the "accountability rule" and discuss the role it plays in contract management.
- e. Discuss the "fee-based" evaluation process, include the development of performance criteria, conduct of the evaluation, and documentation and transmittal requirements for performance.

4.6 Emergency management personnel shall demonstrate a working level knowledge of assessment techniques such as the planning and use of observations, interviews, and document reviews to assess Department of Energy (DOE) and facility performance, report results of assessments, and follow-up on actions taken as the result of assessments.

Supporting Knowledge and/or Skills

- a. Describe emergency management personnel roles with respect to oversight.
- b. Describe the assessment requirements and limitations associated with the emergency management personnel interface with contractor employees.
- c. Explain the essential elements of a performance-based assessment including the areas of investigation, fact-finding, and reporting.
- d. Describe the methods by which noncompliance is determined and communicated to contractor and Department management.
- e. Describe the contents of an assessment report.
- f. Using the findings from an assessment, develop an assessment report.
- g. Explain the significance of each of the following assessment-related activities:
 - Exit interviews
 - Closure process
 - Tracking to closure
 - Follow-up
 - Corrective action plans
- h. Participate in formal meetings between Department management and senior contractor management to discuss results of emergency management assessments.

EVALUATION REQUIREMENTS

The following requirements shall be met to complete the Department-wide Emergency Management Functional Area Qualification Standard. The evaluation process identified below serves as a measurement tool for assessing whether the participants have acquired the technical competencies outlined in this Standard.

1. Documented completion of the Department-wide General Technical Base Qualification Standard in accordance with the requirements contained in that standard.
2. Documented completion of the competency requirements listed in this functional area qualification standard. Documentation of the successful completion of these competency requirements may be satisfied by a qualifying official using any of the following methods:
 - Documented evaluation of equivalencies
 - Written examination
 - Documented oral evaluation
 - Documented observation of performance

CONTINUING TRAINING AND PROFICIENCY REQUIREMENTS

Emergency management personnel shall participate in an Office/facility/position-specific continuing training and qualification program that includes the following elements:

1. Technical education and/or training covering topics directly related to the duties and responsibilities of emergency management personnel as determined by line management. This may include courses and/or training provided by:
 - Department of Energy
 - Other Government agencies
 - Outside vendors
 - Educational institutions
2. Training covering topics that address identified deficiencies in the knowledge and/or skills of emergency management personnel.
3. Training in areas added to the Emergency Management Functional Area Qualification Standard since initial qualification.
4. Specific continuing training requirements shall be documented in Individual Development Plans (IDPs).
5. Emergency management personnel shall either plan, participate in, control, and/or evaluate an emergency management exercise annually.

6. Emergency management personnel shall participate in an assessment of an emergency management program annually.